Impact of California Title 24 Energy Code

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Gabriel D. Taylor, P.E.
California Energy Commission
Goals

- California Policy
- OpenADR in 2019 Title 24
- 2022 Title 24 Schedule
California Policy

- SB 350
- AB 758
- SB 1477
- SB 1414
- AB 3232
- SB 100
DR / DO / DER
Demand Response – Demand Optimization – Distributed Energy Resources

Years
Seasons
Days
Day/Night
Hours
Minutes
Seconds

SHAPE
SHIFT
SHED
SHIMMY
California Code of Regulations
Title 24 (Building Standards)
Part 6 (Energy Code)
2019 Energy Code Demand Response Changes

- Cleanup & Consolidate
- Specify OpenADR
- New Definitions
- Revise Joint Appendix 5 (JA-5)
Energy Code: Title 24, Part 6
Demand Responsive Controls (§110.12)

(a) Demand responsive controls.
1. All demand responsive controls shall be either:
   A. A certified OpenADR 2.0a or OpenADR 2.0b Virtual End Node (VEN), as specified under Clause 11, Conformance, in the applicable OpenADR 2.0 Specification; or
   B. Certified by the manufacturer as being capable of responding to a demand response signal from a certified OpenADR 2.0b Virtual End Node by automatically implementing the control functions requested by the Virtual End Node for the equipment it controls.
Energy Code: Title 24, Part 6
Demand Responsive Controls (§110.12(a)1A)

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Demand Responsive Controls (§110.12(a)1B)

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2019 Energy Code: Demand Response

- **Nonresidential**
  1. Thermostats
  2. Lighting
  3. EMC
  4. General

- **Multifamily**
  5. Solar Ready

- **Residential**
  6. Solar Ready
  7. Water Heaters
  8. HVAC
1. Nonresidential: Thermostats

- Single Zone
  - A/C & Heat Pumps
- Single Zone w/ DDC
  - Additional Shed Requirements
- Alterations
  - §120.2(b), 120.2(h) → 110.12(b), & 141(b)2E

REQUlRED
2. **Nonresidential: Lighting**

- Lighting Controls
- Buildings >10,000 ft$^2$
- LPD > 0.5 W/ft$^2$
- §130.1(e) → 110.12(c)

**REQUIRED**
3. **Nonresidential**: EMC

- Electronic Message Centers (EMC)
- > 15 kW
- > 30% Reduction
- §130.3(a)3 → 110.12(d)

**REQUIRED**
4. **Nonresidential: General**

- Demand Responsive Controls
- For Compliance or Credit
- §130.5(e) → 110.12

**REQUIRED**
5. Multifamily: Solar Ready

- DR Thermostats +
  
  Either:
  - Additional EE, or
  - EV Chargers

- 0 ft² of Solar Ready
  - Down from 250 ft²

- §110.10(b)1B

OPTIONAL

- DR Thermostats
  - 150 ft$^2$ of Solar Ready
  - Down from 250 ft$^2$
- DR Thermostats + Additional EE
  - 0 ft$^2$ of Solar Ready
- §110.10(b)1A

**OPTIONAL**
7. **Residential: Water Heaters**

- Heat Pump Only
- Alterations Only
- Optional:
  - §110.12, or
  - NEEA Tier 3
  - §150.2(b)1Hiia b & c

**OPTIONAL**
8. **Residential: Thermostats**

- Alterations Only
- Optional Testing Allowance
- Rare Cases
  - EXCEPTION to §150.2(b)1Fiia
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Title 24 (Building Standards)  
Part 6 (Energy Code)
Schedule: **2022 Title 24 Standards**

- **2019**: Research & Outreach
- **2020**: Pre-Rulemaking
- **2021**: Rulemaking
- **2023**: 2022 Standards Effective January 1, 2023